

CLAIMS

What is claimed is:

1. A drivetrain assembly comprising:
 - a housing having an aperture through a portion of said housing;
 - a bearing cage disposed in said aperture and secured to said portion; said cage including an opening therethrough;
 - a driven shaft including a shaft portion disposed in said opening; and
 - a bearing assembly supporting said shaft portion in said cage, said bearing assembly including an outer race with at least one protrusion extending therefrom received in said cage preventing rotation of said outer race relative to said cage.
2. The assembly according to claim 1, wherein said bearing assembly is a tapered bearing assembly and said outer race is a cup.
3. The assembly according to claim 1, wherein said bearing assembly is a unitized bearing assembly including spaced apart inner races each supporting a set of rolling bearing elements, and a common outer race supporting both of said sets of rolling bearing elements, wherein said common outer race includes said at least one protrusion.
4. The assembly according to claim 1, wherein said outer race includes a plurality of protrusions arranged radially about an outer surface of said outer race.
5. The assembly according to claim 1, wherein said cage is constructed from a polymer material.

6. The assembly according to claim 5, wherein said polymer material is a nylon material.
7. The assembly according to claim 1, wherein said cage is constructed from a metal matrix containing aluminum and silicon carbide.
8. A drivetrain assembly comprising:
 - a housing having an aperture through a portion of said housing;
 - a bearing cage disposed in said aperture and secured to said portion, said cage including an opening therethrough;
 - a driven shaft including a shaft portion disposed in said opening; and
 - a bearing assembly supporting said shaft portion in said cage, wherein said cage is constructed from a polymer material.
9. The assembly according to claim 8, wherein the bearing assembly includes an outer race with at least one protrusion extending therefrom received in said cage preventing rotation of said outer race relative to said cage.
10. The assembly according to claim 9, wherein said outer race includes a plurality of protrusions arranged radially about an outer surface of said outer race.
11. The assembly according to claim 9, wherein said bearing assembly is a tapered bearing assembly and said outer race is a cup.

12. The assembly according to claim 8, wherein said bearing assembly is a unitized bearing assembly including spaced apart inner races each supporting a set of roller bearings, and a common outer race supporting both sets of roller bearing elements wherein said common outer race includes at least one protrusion extending therefrom received in said cage preventing rotation of said outer race relative to said cage.

13. The assembly according to claim 8, wherein said housing is an axle housing and said driven shaft is a pinion shaft.

14. The assembly according to claim 8, wherein said housing is an axle housing and said driven shaft is an input shaft.

15. The assembly according to claim 8, wherein said housing is an axle housing and said driven shaft is a through shaft.

16. The assembly according to claim 8, wherein said housing is an axle housing and said driven shaft is a wheel end portion of an axle shaft.

17. The assembly according to claim 8, wherein said housing is a transmission housing and said driven shaft is an output shaft.

18. A method of forming a bearing cage for a drivetrain assembly comprising the steps of:

a) placing a bearing assembly having an outer race with at least one protrusion into a mold;

- b) injecting a material into the mold about a portion of the outer race; and
- c) embedding the at least one protrusion in the material.

19. The method according to claim 18, wherein step b) includes injecting a polymer material into the mold.

20. The method according to claim 18, wherein step c) includes injecting the material about at least one protrusion.

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